Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1-21. (cancelled)

22. (currently amended) A catheter having a vacuum seal, comprising:

an elongate catheter shaft having a proximal end, a distal end, a guidewire lumen defined therethrough, and an inflation lumen defined therethrough;

a balloon disposed adjacent the distal end of the catheter shaft, the balloon being in fluid communication with the inflation lumen;

a port disposed at the proximal end of the catheter shaft, the port having an opening defined therein that is in fluid communication with the inflation lumen and a flanged end; and

a seal member releasably attached to the flanged end and covering the opening;

a vacuum within the inflation lumen, wherein the seal member does not include a preformed opening and is self-sealing such that the seal maintains a vacuum within the inflation lumen.

23. (cancelled)

24. (previously presented) The catheter of claim 22, wherein the seal is generally planar.

25. (previously presented) The catheter of claim 22, wherein the seal extends laterally beyond the flanged end of the port.

26. (previously presented) The catheter of claim 22, wherein the seal is pierceable.

27. (cancelled)

28. (previously presented) The catheter of claim 22, wherein the seal defines the proximal-most end of the port.

29. (cancelled)

30. (previously presented) The catheter of claim 22, further comprising a cap coupled to the port and disposed over the seal.

31. (Withdrawn) A method of preparing a balloon catheter, comprising the steps of:

providing a balloon catheter, the catheter comprising:

an elongate catheter shaft having a proximal end, a distal end, a guidewire lumen defined therein, and an inflation lumen defined therein,

a balloon disposed adjacent the distal end of the catheter shaft, the balloon being in fluid communication with the inflation lumen, and

a port disposed at the proximal end of the catheter shaft, the port having an opening defined therein that is in fluid communication with the inflation lumen;

coupling a sealing device to the port, the sealing device including a vacuum source and a seal attachment means having a seal coupled thereto;

applying the vacuum source of the sealing device to the inflation lumen until the air pressure therein is substantially less than atmospheric pressure; and

disposing the seal across the opening in the port with the seal attachment means.

32. (Withdrawn) The method of claim 31, wherein the step of coupling a sealing device to the port includes threadingly attaching the sealing device to the port.

33. (Withdrawn) The method of claim 31, further comprising the step of disposing a cap over the seal and attaching the cap to the port.

34. (Withdrawn) The method of claim 31, further comprising the step of injecting a fluid into the inflation lumen by piercing the seal with a needle.

35. (currently amended) A balloon catheter, comprising:

an elongate catheter shaft having a proximal end region, a proximal port disposed adjacent the proximal end region, a distal end region, a balloon disposed adjacent the distal end region, and an inflation lumen extending between the port and the balloon, wherein an inner surface of the lumen includes a chemical coating capable of binding air;

wherein the port includes a proximal end, a proximal flange, and a proximal end surface defined by the proximal end and the proximal flange; and

a seal releasably attached to the proximal end surface that seals the inflation lumen;

a vacuum within the inflation lumen, wherein the seal does not include a preformed opening and is self-sealing such that the seal maintains a vacuum within the inflation lumen.

36. (Withdrawn) A method of preparing a balloon catheter, comprising the steps of:

providing a balloon catheter, the catheter including an elongate catheter shaft having a proximal end region, a proximal port disposed adjacent the proximal end region, a distal end region, a balloon disposed adjacent the distal end region, and an inflation lumen extending between the port and the balloon, wherein the port includes a proximal end, a proximal flange, and a proximal end surface defined by the proximal end and the proximal flange;

coupling a sealing device to the proximal port, the sealing device including a vacuum source and a seal attachment means having a seal coupled thereto;

applying the vacuum source of the sealing device to the inflation lumen until the air pressure therein is substantially less than atmospheric pressure; and

disposing the seal across the proximal end surface with the seal attachment means.

37. (previously presented) The catheter of claim 22, wherein an inner surface of the lumen includes a chemical coating capable of binding air.